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|  | Strand | Knowledge and understanding | Strand: Processes and production skills |
|  |  | Digital systems | Representation of data | Collecting, managing and analysing data | *Creating digital solutions by:* |
| Investigating and defining | Evaluating | Collaborating and managing |
|  | **Content Description** | Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001 ) | Recognise and explore patterns in data and represent data as pictures, symbols and diagrams (ACTDIK002 ) | Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003) | Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004) | Explore how people safely use common information systems to meet information, communication and recreation needs (ACTDIP005) | Create and organise ideas and information using information systems independently and with others, and share these with known people in safe online environments (ACTDIP006) |
| **Sequence of Lessons / Unit** | **Approx. time rq’d** | **Year A or B** | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # | CD  | Achievement standard # |
| Staying safe online | 5 | 2 |  |  |  |  |  |  |  |  |  | 5 |  | 5 |

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| **Years F-2 Achievement Standard** | **Years 3 and 4 Achievement Standard** |
| By the end of Year 2* Students identify how common digital systems (hardware and software) are used to meet specific purposes. (1)
* They use digital systems to represent simple patterns in data in different ways. (2)
* Students design solutions to simple problems using a sequence of steps and decisions. (3)
* They collect familiar data and display them to convey meaning. (4)
* They create and organise ideas and information using information systems, and share information in safe online environments. (5)
 | By the end of Year 4* Students describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. (1)
* They explain how the same data sets can be represented in different ways. (2)
* Students define simple problems, design and implement digital solutions using algorithms that involve decision-making and user input. (3)
* They explain how the solutions meet their purposes. (4)
* They collect and manipulate different data when creating information and digital solutions. (5)
* They safely use and manage information systems for identified needs using agreed protocols and describe how information systems are used. (6)
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**Staying safe online**

Passwords are an important aspect of using digital systems and are designed to restrict access to personal files and information. Find out what students know about passwords, including what they are, who uses them, why they are used, why they are kept secret and what a strong password is. Revisit classroom rules about how to behave online in a safe and acceptable manner. Explore instances of cyberbullying and discuss strategies to deal with these situations. Explore how pop-up files might harm a computer. Provide opportunities for students to share ideas in an online space using a suitable classroom context.

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| Flow of activities |  |
| Short text | **Passwords**Learn about the importance of password strength and rules about passwords.  | **Cyberbullying**Explore instances of cyberbullying and discuss strategies to deal with these situations.  | **Computer security**Explore how pop-up files can harm a computer.  | **Sharing information online**Share ideas in an online space using a suitable classroom context.  |
| Questions to guide exploration | *What should I know about passwords?* | *What is cyberbullying?*  | *What files might harm a computer?*  | *What rules should I follow when sharing ideas online?*  |
| AC Alignment | Evaluating (ACTDIP005)Collaborating and managing (ACTDIP006) | Evaluating (ACTDIP005)Collaborating and managing (ACTDIP006) | Evaluating (ACTDIP005)Collaborating and managing (ACTDIP006) | Evaluating (ACTDIP005)Collaborating and managing (ACTDIP006) |
| What’s this about? | Passwords are an important part of using digital systems. They are designed to restrict access to personal files and information. Knowing the username and password authorises the user to access specific information that is intended for their own use. Students need passwords at a young age, especially when they are interacting online. At this level it is important for students to understand the concept of password strength. When creating a password, they should not include information that people might know about them, such as their name or their pet’s name. The password shouldn’t be a simple number sequence, such as 12345. Students also need to know that passwords must not be shared.  | Cyberbullying at this level is most likely minimal; however, it is worthwhile to discuss bullying. It is suggested that students be made aware of how inappropriate it is to bully online, as well as how to recognise cyberbullying. Discuss simple strategies for dealing with cyberbullying, including telling a trusted adult. An underlying principle in acceptable online behaviour is respecting the feelings of others. | As students learn about digital systems, they need to understand the potential dangers of using the internet. Raise the topic of computer viruses with students, and talk about how viruses can harm a computer.Discuss how downloading a file to the computer is a potential risk if the file is not from a trusted source. Viruses can be hidden in downloadable files.  | Online spaces are valuable for their ability to encourage and enable collaboration.Collaborating online requires that people understand online etiquette and are able to effectively and respectfully navigate the environment. |
| The focus of the learning (in simple terms) | Find out what students know about passwords: what they are, who uses them, why they are used, why they are kept secret and what a strong password is. Talk to students about their experiences of passwords when using the computer. Introduce passwords in an engaging way, such as through the animated ‘Password rap’, linked under supporting resources. Students then create a poster that describes how to create a password and important things to consider when creating a password.  | Revisit classroom rules about how to behave online in a safe and acceptable manner. Discuss respecting the feelings of others and what that might look like in the classroom, in the schoolyard and when online. Explore cyberbullying to recognise what it is and ways to deal with cyberbullying situations. If time permits, ask students to role play certain situations that involve cyberbullying and ways to deal with the situation.  | Discuss the potential dangers when using digital systems such as a computer or tablet device. Discuss the ‘second click’ rule. This is the idea that students can click on something safely, but if something pops up that seems inappropriate or that they are unsure of they need to talk to an adult before clicking a second time. Use a relevant activity to explore the harm that pop-ups and viruses might do to a computer.  | Provide opportunities for students to share ideas in an online space using a suitable classroom context. Students may use a collaboration tool such as Seesaw, OneNote or an intranet space. Apply rules for safe and acceptable behaviours. Discuss the fair use of images located on the internet for use in students’ own digital solutions. Set the students a simple task that taps into their interests or that is a currently studied topic, such as researching a famous sportsperson or animal. Students work in small groups to produce a shared document (for example, on Google Docs). Together, they create a digital poster describing the key information about a topic. |
| Supporting resources and tools and purpose/context for use.  | [The password rap](https://www.netsmartz.org/NetSmartzKids/PasswordRap)This animation uses a rap song to explain passwords. It’s a great fun way to begin a discussion about passwords.  | [Cyberbullying](https://esafety.gov.au/education-resources/classroom-resources/hectors-world/cyberbullying)Use these resources to explore ways to recognise and deal with cyberbullying.  | [Computer security](https://esafety.gov.au/education-resources/classroom-resources/hectors-world/computer-security) Use these resources to introduce online security. | [Google Docs](https://www.google.com.au/docs/about/)This tool allows students to collaborate on a shared document online.  |
| Assessment | **Suggested approaches**Poster about passwords**Achievement standard** **Create** and **organise** ideas and information using information systems, and **share** information in safe online environments. | **Suggested approaches** Role play about cyberbullying**Achievement standard** **Create** and **organise** ideas and information using information systems, and **share** information in safe online environments. | **Suggested approaches** Presentation or demonstration **Achievement standard** **Create** and **organise** ideas and information using information systems, and **share** information in safe online environments. | **Suggested approaches** Online document**Achievement standard** **Create** and **organise** ideas and information using information systems, and **share** information in safe online environments. |